on their occurrence there. In Gloucestershire, though the species is rarer, there is a much higher percentage of these two forms.

In answer to my enquiry about his brood Mr. Coney kindly told me that the wild female was ab. *melaleuca* and that he had bred 107 *melaleuca*, 22 ab. *intermedia*, Tutt, and 17 types. I had been under the impression that *intermedia* was the heterozygote and that *melaleuca* and type were the two homozygotes. His information showed that this could not be so, but the numbers he gave did not agree with any simple Mendelian ratio. I noticed however that the ratio of *melaleuca* to types and *intermedia* together was nearly three to one, and after puzzling over it for some time I thought that possibly there was sexual dimorphism and examined the sex of such as were available. The 7 types were all males and the 12 *intermedia* were all females. Mr. Coney was good enough to examine those still in his possession and found that his 6 types were males and his 6 *intermedia* were females, and that both sexes were represented in his *melaleuca*. To confirm the view that types are males and *intermedia* females I examined the continental series in the British Museum and found that the 14 types were males, as I expected, and the 8 *intermedia* were females. Mr. H. B. Williams examined his specimens and found that his 2 types and 4 *intermedia* alleged to come from Taunton were males and females respectively, and that his type from Worcester bred by Hancock in May, 1908, was a male. Taking them all together the 30 types were all males and the 30 ab. *intermedia* were all females, and there can be no doubt that the species is sexually dimorphic and that ab. *intermedia*, Tutt, is merely the female of the plainer grey type. Even in ab. *melaleuca* there is some sexual difference, the females being more distinctly black and white than the males.

Reverting to the brood bred by Mr. Coney, there were 107 *melaleuca* to 39 type and *intermedia*, which is in close agreement with the ordinary 3 : 1 ratio, though there were three too many type and *intermedia*. There can be little doubt that the wild female parent was heterozygous for the pale sexually dimorphic form and must have paired with a male of the same constitution, and in view of the rarity of this form in Somerset it is probable that the male was a brother of the female parent. The grey type form then is the male and the variegated ab. *intermedia*, Tutt, is the female of the pale form, which is recessive to the common black and white ab. *melaleuca*, View. I have found a good many records of broods of *melaleuca* bred from wild females of the same form, but I have been unable to find any record of a brood like that of Mr. Coney, or of one with *intermedia* as the female parent.

Seitz gives figures of all three, and says that *melaleuca* is the commonest and that ab. *intermedia* is commoner than the type. It is unlikely that there is any difference in the numbers of the two sexes, but more females than males may be found owing to the difference in their appearance or to some difference in their habits.

Description of the Larva of Mallocephala deserticola, Berg. (Arctiidae).

By KENNETH J. HAYWARD, F.R.E.S., F.R.G.S., F.Z.S.

Length 35-38mm.

A greyish larva with a white dorsal and a greyish lateral stripe, ringed on each segment with tufts of short brown hairs and longer darker hairs, the head brown.

Head, argus brown (Ridgway III. 13.m), frons of the same colour, the clypeal suture white. Antennae, mandibles and palpi white, ringed or marked with brown. Thorax and abdomen white speckled with black, the speckling irregular in shape and size and much reduced on the ventral parts. A pure white doraal stripe and a greyish lateral stripe, the latter formed by reduction of the dark speckling.

Prothoracic segment with a brown dorsal pad speckled with minute brown warts from which rise tufts of short light brown hairs or longer sparser darker brown hairs, all these hairs closely spined with tiny up-pointing spines. Apart from this dorsal pad there are a pair of posterior trapezoidal tubercles slightly posterior to the pad and laterally two more prominent tubercles. All the tubercles carried by the larva are covered with the minute brown setose warts. The meso- and metathoracic segments with rings of eight similar tubercles. The 1st and 2nd abdominal segments carry anterior and posterior trapezoidal tubercles and in line with the latter a ring of tubercles comprising supraspiracular, subspiracular, lateral and marginal and on the ventral portion of the larva a pair of very small ventral tubercles and between this pair and the marginal tubercle a somewhat larger ventral tubercle. The leg-bearing abdominal segments are the same except for the lack of the ventral tubercles and the 7th and 8th segments correspond to the 1st and 2nd. On the 9th abdominal segment there is a pair of large dorsal tubercles or pads with a single lateral tubercle. The 10th segment has two defined but smallish tubercles on the dorsum and a posterior ridge but the whole segment is lightly covered with the small dark brown warts. Below the anus are two very feeble tubercles.

The prolegs are externally brown, darker at the joints, internally brown and white, the final segment dark brown. The claws are simple but near the end of the final segments are two short bristles. The legs have a half ring of the brown setose warts on each segment.

The abdominal and anal claspers are light brown with numerous brown setose warts and the hooks are placed in a line with a secondary row of very minute hooks behind.

The larva appears to be a general feeder, having been taken on about ten different foodplants at Concordia (Entre Rios) in October 1934.

NOTES ON COLLECTING, etc.

Single Brooded Polyommatus icarus ; Sheffield.—The common blue is by no means a common butterfly in the Sheffield area, but from time to time, small colonies appear in new places and then disappear again as suddenly as they came.

In South Yorkshire, about 12 miles from Sheffield, there is a belt of Magnesian Limestone on which *P. icarus* is widespread and abundant. There, two broods are produced every year, one in June and the other in August, and occasionally a third brood occurs. A third brood, for instance, was produced at Maltby in late October 1934. The specimens were extremely small.

In North Derbyshire, there is an extensive area of Carboniferous Limestone, the nearest point being about ten miles from Sheffield ; and in the valleys and dales, among the Limestone hills, *P. icarus* is to be